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ABSTRACT

A battery management system preferably has a base station utilized in connection with a portable electronic device for providing electrical therapy to the body of a patient in response to the occurrence of a treatable condition. The portable device can have a rechargeable battery, memory, data processor for determining available operating time for the portable device prior to recharging, and a display panel, or alarm, to inform the patient of such available operating time. The portable device data processor contains an analog to digital converter which is used to obtain and record data regarding the patient, the battery, and the portable device operational status. The base station can have a receptacle to receive the portable device, including a port for transferring data between the memory of the portable device and the base station, a power supply associated with the port for supplying charging current to the battery, a computer for exchanging information with the portable device memory, and a battery maintenance portion. The maintenance portion can perform tests on the battery to evaluate the condition thereof. The base station can further include a display and alarms to inform the patient regarding the condition of both the battery and the portable device. The portable device can also include a converter-defibrillator and a second battery maintenance portion which can operate independently of the base station. Tests can be performed, during operation of the portable device, to evaluate the condition of the battery while the portable device is separated from the base station.